

UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: JANUARY, James R.

Application No.: 10/706427

Filing Date: 12 November 2003

Title: WATERCOLOR CANVAS

Art Unit: 1771

Examiner: Gofman, A.

Confirmation No.: 1771

Customer No.: 25207

Docket No.: 148759.01500 (Old 14045.015US)

DECLARATION UNDER 37 CFR 1.132

Via Fax: +1.571.273.8300

11 December 2006

Commissioner of Patents
PO Box 1450
Alexandria VA 22313-1450

Sir:

I, James Richard January, am the inventor for the invention disclosed and claimed in this patent application. I am over the age of majority. I am making this declaration of my own free will in traverse of the rejections made by the USPTO examiner in the office action dated 11 August 2006.

Background Of My Invention

1. My invention as disclosed and claimed in this (my) patent application is a primed substrate (such as a canvas) suitable as a support or medium for watercolor painting using watercolor (water-based) paints, pencils, and inks.

I certify that I have transmitted this document via facsimile to the USPTO to the central facsimile receiving number of +1.571.273.8300, this 12th day of December, 2006.


Lawrence F. Colton

2. Watercolor techniques are distinguished from other painting techniques by their very fluid nature, employing large amounts of water before, during, and/or after application of the colors. The support must be able to absorb, retain, and eventually release all of the water. The support must provide a range of "control" to allow the artist to create the desired amount of "flow" of the colors.

3. Hydrophobic acrylic and other polymeric emulsions typically form hydrophobic films and so tend to repel water.

4. Water-soluble film formers of both natural and synthetic derivation will allow and provide absorption of water into the film body, but the water also tends to re-dissolve the film. Polyvinyl alcohol, polyvinyl pyrrolidone, gums, starches, and similar polymers fall into this category.

5. Cotton and other natural fiber woven canvases are efficient at absorbing water by both their hydrophilic nature as well as via capillary action. However, natural fiber woven canvases generally are not acceptable as support for watercolor techniques due to the background pattern of the canvas weave that is "developed" by the colors.

6. My invention is achieved by the inclusion of water-soluble film formers into a typical latex-based coating and then applied to a (woven) canvas base to form the support. If there is too little water-soluble polymer, then the surface remains too repellant for watercolor techniques. If there is too much water-soluble polymer, then the coating loses its integrity when large amounts of water typical of watercolor techniques are applied. This ratio also is important to optimize the quality of removing ("lifting") the colors from the surface in order to create special effects typical of watercolor techniques.

Comparing My Invention As Claimed To The Lovell '073 Patent

7. Claims 13, 18 and 23 of my patent application, which have been rejected as being obvious over the Lovell '073 patent, and as amended to be independent form, read:

Claim 13. A coated substrate for use by artists that is suitable for accepting watercolor paints, comprising a substrate and a coating on the substrate, wherein the substrate is a flexible canvas selected from the

group consisting of cotton and linen canvases and the coating is made from a paint mixture,

wherein the paint mixture comprises from 150 parts by weight water-based latex, 2 parts by weight pigment dispersant, 0.8 parts by weight defoamer, 115 parts by weight calcium carbonate, 20 parts by weight talc, 2 parts by weight surfactant, and 30 parts by weight water,

wherein the paint mixture is mixed with a water soluble polymer to create the coating, and the water soluble polymer is added to the paint mixture at a ratio of 1 to 30 weight percent based on the weight of solids in the paint mixture,

wherein the water-based latex is an acrylic latex and the water soluble polymer is selected from the group consisting of polyvinyl alcohol, polyethylene oxide, cellulose and its derivatives, polyvinyl pyrrolidone, starch, animal hide glue, gum Arabic, xanthan gum and guar gum,

whereby (a) the coating has a formulation that accepts watercolor paints without unacceptable running or bleeding of the watercolor paints in and on the coating, (b) the coating is applied to the substrate, and (c) the formulation of the coating allows for the removal of the watercolor paints from the coating without harming the coating by wetting the coating and wiping off the watercolor paints.

Claim 18. A coating for applying to a substrate, the coating being suitable for accepting watercolor paints, pencils, and inks, wherein the coating is made from a paint mixture comprising from 100-200 parts by weight water-based latex selected from the group consisting of acrylic latexes, vinyl latexes, polyvinyl latexes, other common and known latexes, and mixtures thereof; 0-5 parts by weight pigment dispersant; 0-2 parts by weight defoamer; 75-150 parts by weight pigment and filler selected from the group consisting of titanium dioxide, calcium carbonate, magnesium carbonate, magnesium silicate, clay, inorganic colors, barium sulfate, mica, zinc oxide, zinc dust, metallics, carbon blacks, organic colors, silica, other silicates, aluminates, sulphates, carbonates, and mixtures thereof; 0-

50 parts by weight extender selected from the group consisting of china clay, kaolin clay, talc, silica, whiting, metal stearates, gypsum, mica, barite, blanc fixe; 0-5 parts by weight surfactant; and 0-50 parts by weight water, and wherein the paint mixture then is mixed with a water soluble polymer at a ratio of 1 to 30 weight percent based on the weight of solids in the paint mixture to create the coating,

wherein (a) the coating has a formulation that accepts watercolor paints, pencils, and inks without unacceptable running or bleeding of the watercolor paints, pencils, and inks in and on the coating, (b) the coating is applied to the substrate, and (c) the formulation of the coating allows for the removal of the watercolor paints, pencils, and inks from the coating without harming the coating by wetting the coating and wiping off the watercolor paints, pencils, and inks.

Claim 23. A coating for applying to a substrate for use by artists, the coating being suitable for accepting watercolor paints,

wherein the paint mixture comprises from 150 parts by weight water-based latex, 2 parts by weight pigment dispersant, 0.8 parts by weight defoamer, 115 parts by weight calcium carbonate, 20 parts by weight talc, 2 parts by weight surfactant, and 30 parts by weight water,

wherein the water-based latex is an acrylic latex and the water soluble polymer is selected from the group consisting of polyvinyl alcohol, polyethylene oxide, cellulose and its derivatives, polyvinyl pyrrolidone, starch, animal hide glue, gum Arabic, xanthan gum and guar gum, and

wherein the paint mixture then is mixed with a water soluble polymer at a ratio of 1 to 30 weight percent based on the weight of solids in the paint mixture to create the coating,

whereby (a) the coating has a formulation that accepts watercolor paints without unacceptable running or bleeding of the watercolor paints in and on the coating, (b) the coating is applied to the substrate, and (c) the formulation of the coating allows for the removal of the watercolor paints

from the coating without harming the coating by wetting the coating and wiping off the watercolor paints.

8. I have read the Lovell '073 patent and it is not in the same technical field as the present invention and does not disclose or claim either the elements of or the use of my invention. In fact, the Lovell '073 patent does not even disclose or teach elements or combinations related to the field of my invention. As defined by the Lovell '073 patent itself, the Lovell '073 invention is a medium temperature conductive-resistive coating composition for providing temperature adjustment capability to a substrate. Specifically, the Abstract of the Lovell '073 patent teaches me that the invention is:

A medium temperature conductive-resistive article employing graphite suspended in a high temperature polymer based activator and water is disclosed. The conductive-resistive substance can be applied to a fabric-like substrate in order to provide an electrical resistive temperature adjustable heating element which can alter the temperature of the fabric-like substrate when electrical current is permitted to flow through the conductive-resistive substance. A process of making the article is also disclosed.

On the contrary, the present invention as defined in the specification is a flexible coated material for use as a medium for watercolor and inkjet printing using water-based inks, in which the coating accepts water-based colorants without unacceptable running or bleeding of the colorants and the coating allows for the removal of the colorants from the coating without harming the coating by wetting the coating and wiping off the colorants.

9. Graphite is not a pigment as understood by a person of ordinary skill in the art. While carbon black is a pigment, one of ordinary skill in the art does not view graphite a pigment because of graphite's physical properties. For example, the refraction properties of graphite do not allow graphite to be suitable as a pigment. Although the 10th Edition of the Merck Index, published in 1983, does state that one of the uses of graphite is as a "pigment", graphite has very limited practical use as a pigment. Graphite also is described as a *crystalline* form of carbon whereas lampblack and carbon black – which are commonly used as pigments – are *amorphous* carbon.

So, although graphite might be loosely described as having use as a pigment, those skilled in the art would not consider graphite as a pigment.

10. Furthermore, Ralph Mayer, a well-known expert in the field, defines "Graphite" as:

An allotropic form of pure carbon. Principal uses: lead pencils, stove polish, anticorrosive paint, lubricant. Grayish black, semicrystalline, flaky, greasy. Permanent but seldom used as an artist's pigment in fluid paints.

Page 49 of *The Artist's Handbook of Materials and Techniques*, Fourth Edition, Revised and Updated, by Ralph Mayer, The Viking Press, NY, copyright circa 1940, 1957, and 1970 by Ralph Mayer. The updated version of this book was first published in 1981 by the Viking Press. My copy is from the fourth printing, April, 1985. Note that Mayer's book is considered essentially the "bible" by most artists, conservators, etc.

11. Furthermore, I do not find anywhere in the Lovell '073 patent where Lovell describes graphite as a "pigment". In the "Detailed Description of the Preferred Embodiments" section of the Lovell '073 patent, Column 5, about lines 16 – 20, Lovell discusses "Other optional additives ... including, for example colorants, fillers and extenders" ... that may be present. Then in Column 6, about lines 16 – 20, Lovell discusses "...pigments such as titanium dioxide (and) zinc oxide..." as well as extenders and other paint components. It appears to me that Lovell has clearly differentiated the purpose of the graphite from that of a pigment. And none of the claims in the Lovell '073 patent uses the term "pigment" in any discussion of Lovell's use of the graphite.

12. The independent claims of the Lovell '073 patent, Claims 1 and 14, neither disclose the same set of elements of any of my claims, and especially Claims 13, 18, and 23, nor would lead me to believe the Lovell '073 invention could be applied to the water-based paint support field. The Lovell '073 Claim 1 and 14 read:

Claim 1. An electrical resistant temperature adjustable article,
which comprises:
a first substrate; and
a medium temperature conductive-resistive coating applied to said
substrate, said medium temperature conductive-resistive coating

comprising 10-30 weight percent graphite having a particle size from about 150 to about 325 mesh, 20-65 weight percent polymer latex and 6 to 60 weight percent total water based on 100 weight percent total composition;

wherein said article is capable of having its temperature adjusted between ambient temperature and 400°F.

Claim 14. A method of providing temperature-adjustment capability to a substrate comprising applying a coating of a medium temperature conductive-resistive substance to said substrate, said medium-temperature conductive-resistive substance comprising 10-30 weight percent graphite having a particle size from about 150 to about 325 mesh, 20-65 weight percent polymer latex and 6 to 60 weight percent total water based on 100 weight percent total composition, wherein said article is capable of temperature adjustment between ambient temperature and 400°F.

13. Nowhere in the Lovell '073 patent is watercolor or supports or media for watercolor techniques mentioned. The Lovell '073 patent specifically discloses and claims the inclusion of graphite as a key element of the invention for the purpose of making semi-conductive coatings or taking advantage of the current conducting properties of graphite. The application of the Lovell '073 patent coating formulation to a textile is simply to provide a carrier for the material, and not for treating the textile or for making the textile suitable for any particular purpose. The Lovell '073 patent makes no teaching or claim that the textile adds any functionality aside from being a flexible carrier for the coating.

14. The Lovell '073 patent does describe the use of hydrophilic (water-soluble) polymers such as polyvinyl pyrrolidone – applied in a separate step to the substrate – to make the substrate “hydrophilic in nature”, Lovell '073 does not disclose, and does not allow one of ordinary skill in the paint field to develop, a coating suitable for accepting a watercolor paint. However, the water-soluble polymer is NOT added to the coating formulation. In my experience, adding the water-soluble polymer to the substrate, as is done in the Lovell '073 patent, is only to make the coating stick better to the substrate,

while adding the water-soluble polymer to the coating formulation itself, as is done and claimed in my patent application, makes the coating perform better.

15. When I compare my invention to the Lovell '073 invention, it is readily apparent that even Claim 1 of my invention, let alone Claim 13, is distinct:

Lovell '073	My Claim 1	My Claim 13
An electrical resistant temperature adjustable article, which comprises:	A coated substrate suitable for accepting watercolor paints, pencils, and inks, comprising	A coated substrate for use by artists that is suitable for accepting watercolor paints, comprising
a first substrate; and	a substrate and	a substrate and
a medium temperature conductive-resistive coating applied to said substrate,	a coating on the substrate,	a coating on the substrate, wherein the substrate is a flexible canvas selected from the group consisting of cotton and linen canvases and the coating is made from a paint mixture,
said medium temperature conductive-resistive coating comprising 10-30 weight percent graphite having a particle size from about 150 to about 325 mesh, 20-65 weight percent polymer latex and 6 to 60 weight percent total water based on	NO IDENTICAL OR EQUIVALENT ELEMENT TO GRAPHITE IN LOVELL '073	NO IDENTICAL OR EQUIVALENT ELEMENT TO GRAPHITE IN LOVELL '073 wherein the paint mixture comprises from 150 parts by weight water-based latex, 2 parts by weight pigment dispersant, 0.8 parts by weight defoamer, 115 parts by weight calcium carbonate, 20 parts by weight talc, 2 parts by weight surfactant, and 30 parts by weight water,

100 weight percent total composition;		
NO DISCUSSION IN THE CLAIM OF THE USE OF A WATER SOLUBLE POLYMER		wherein the paint mixture is mixed with a water soluble polymer to create the coating, and the water soluble polymer is added to the paint mixture at a ratio of 1 to 30 weight percent based on the weight of solids in the paint mixture, wherein the water-based latex is an acrylic latex and the water soluble polymer is selected from the group consisting of polyvinyl alcohol, polyethylene oxide, cellulose and its derivatives, polyvinyl pyrrolidone, starch, animal hide glue, gum Arabic, xanthan gum and guar gum,
NO DISCUSSION OR TEACHING ANYWHERE OF FORMULATING A COATING SUITABLE FOR PAINTING – ONLY “ELECTRICAL RESISTANT TEMPERATURE ADJUSTABLE” IN THE PREAMBLE	wherein (a) the coating has a formulation that accepts watercolor paints, pencils, and inks without unacceptable running or bleeding of the watercolor paints, pencils, and inks in and on the coating, (b) the coating is applied to the substrate, and (c) the formulation of the coating allows for the removal of the watercolor paints, pencils, and	whereby (a) the coating has a formulation that accepts watercolor paints without unacceptable running or bleeding of the watercolor paints in and on the coating, (b) the coating is applied to the substrate, and (c) the formulation of the coating allows for the removal of the watercolor paints from the coating without harming the coating by wetting

	inks from the coating without harming the coating by wetting the coating and wiping off the watercolor paints, pencils, and inks.	the coating and wiping off the watercolor paints.
wherein said article is capable of having its temperature adjusted between ambient temperature and 400°F.	NO DISCUSSION OR TEACHING ANYWHERE OF TEMPERATURE ADJUSTMENT	NO DISCUSSION OR TEACHING ANYWHERE OF TEMPERATURE ADJUSTMENT

16. An identical chart can be constructed regarding my other independent Claims 9, 14, 18, 19, and 23, and comparing the Lovell '073 patent Claim 14 to my claims, and the results would be identical – the Lovell '073 patent and claims do not claim the same elements or combinations and do not claim elements or combinations that would make my invention obvious to someone like me, who is of at least ordinary skill in this field.

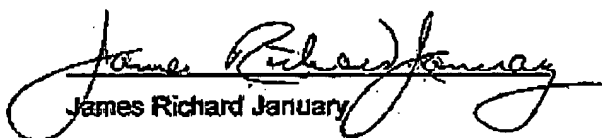
17. The Lovell '073 patent makes no mention of pigment dispersant, calcium carbonate, or water soluble polymer, because these components simply are not important in the Lovell '073 invention. These components have nothing to do with the electrical resistance or temperature adjustment capabilities of the Lovell '073 invention. As mentioned above, if there is too little water-soluble polymer, then the surface remains too repellant for watercolor techniques, and if there is too much water-soluble polymer, then the coating loses its integrity when large amounts of water typical of watercolor techniques are applied.

18. As expected, the Lovell '073 patent also makes no mention of the relative quantities of defoamer, surfactant, and the extender relative to the overall coating because, as above - they have nothing to do with the electrical resistance or temperature adjustment capabilities of the Lovell '073 invention. However, for aspects of the present invention, these elements, and the relative amounts of these elements,

determine whether the invention will have the desired "formulation of the coating [that] allows for the removal of the watercolor paints, pencils, and inks from the coating without harming the coating by wetting the coating and wiping off the watercolor paints, pencils, and inks" as required by my claims.

19. To me, the two inventions could not be more different, and those of ordinary skill in the artist canvas field, such as me, would not look to the conductive-resistance field for inspiration. Specifically, as graphite is not considered a pigment by those of ordinary skill in the art, one could not view Lowell '073 and derive my invention. For example, the Lowell '073 patent requires conductive resistance in the claims, while my invention makes no mention of such a property either in the claims or in the specification. For another example, the Lowell '073 patent *requires* the use of graphite as an active ingredient, while my invention *only suggests* a use of carbon black as a filler or pigment, but for not for any active purpose. As one of ordinary skill in the art recognizes, graphite and carbon black have entirely different properties. While it may be attractive to compare graphite with carbon black, graphite is a soft, hexagonal crystal allotrope of carbon with a greasy feel, often used in pencils and lubricants, but also can be fabricated into electrodes and rocket nozzles. Carbon black, to the contrary, is a finely divided form of *amorphous* carbon derived from the incomplete combustion of natural gas or petroleum oil and often is used as an ingredient in inks, paints, crayons, and polishes. So, while one, graphite, is used in many industrial applications, the other, carbon black, is used as a colorant, and the two cannot be interchanged. Again, graphite is not a recognized pigment.

I have been warned that false statements and the like are punishable by fine or imprisonment, or both under Title 18, Section 1001, of the United States Code (18 U.S.C. 1001) and may jeopardize the validity of my patent application or any patent issuing thereon. All statements made in this declaration of my own knowledge are true and all statements made on information and belief are believed to be true.


James Richard January